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| 09/731,915      | 12/08/2000  | Satoru Miyashita     | 101050.01           | 6866             |

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EXAMINER

TARAZANO, DONALD-LAWRENCE

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 03/05/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/731,915

Applicant(s)

MIYASHITA ET AL.

Examiner

D. Lawrence Tarazano

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 25-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/101,083.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 31 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is not clear where the applicants have support for claiming that the luminescent layers are in contact with each other. They appear to be separated as in the prior art (see figure 1 of the instant application).

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 26-31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 26-31 make reference to claim 1, which is canceled. The claims are indefinite since they depend from a canceled claim; this makes the metes and bounds of the claims undeterminable. For the purpose of examination with respect to prior art, the examiner takes the position that the claims should depend from claim 25.

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5. In claim 25, it is not clear what the applicants mean by “contact” and the phrase “luminescent layers in adjacent pixel electrodes are in contact with each other”. It is not clear if this is physical or electrical “contact”. It also is unclear what the applicants mean by “in”. These are physically distinct structures; it does not appear that one is in the other.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

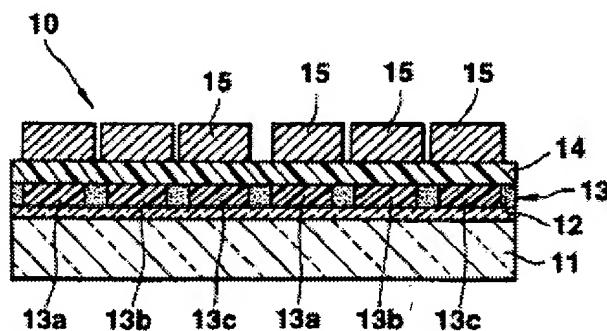
The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 25 and 27-31 are rejected under 35 U.S.C. 102 (b) as being anticipated by Shirasaki et al. (5,895,692).

8. Shirasaki et al. teach electro luminescent devices (column 4, lines 35+). As shown in figure 1 below, the structure comprises a transparent substrate (11), transparent pixel electrodes (12), a luminescent layer (13) comprising a poly-N-vinylcabazole (PVCZ) matrix having color

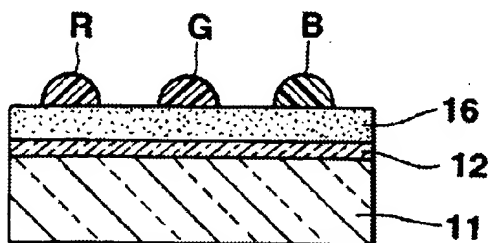
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pixels (13a, b, c), which had been printed by ink jet or other means and then diffused, into the polymer matrix. The devices also have an electron injection layer (14) deposited over the luminescent layer and a second set of individual electrodes (15), which correspond to the applicants' "switching elements"



9. Figure 7B show the R (Red), G (Green) and B (Blue) pixels being formed on the surface of the luminescent hole transport layer (16), by a lithographic (coating) or ink jet method (column 7, lines 14+). The color pixels diffuse into layer (16) so would be in contact with each other as claimed (corresponding to the above layer 13).

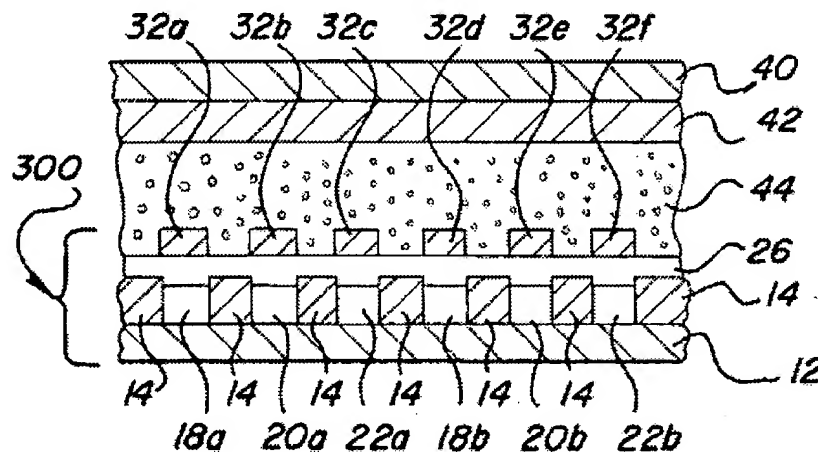
**FIG.7B**



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10. Claims 25-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Yaniv (5,576,070).

Yaniv teaches a liquid crystal display made by an ink-jet printing method (column 5, lines 26+), in which over the pixels are placed individual electrodes (32), which can further comprise (40) micro-electronic devices such as transistors that enhance the switching and other performance of the device (column 8, lines 11+).



### Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner cites US 2002/0011783 (claims), 5,9725,419, and 6,137,221 as relating to EL structures made by ink jet printing processes.

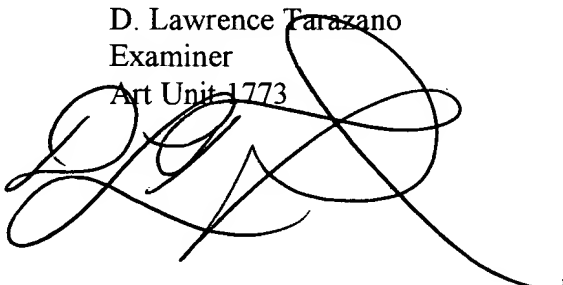
Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. Lawrence Tarazano whose telephone number is (703)-308-2379. The examiner can normally be reached on 8:30 to 6:00 (off every other Friday).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J Thibodeau can be reached on (703)-309-2367. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9310 for regular communications and (703)-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0661.

D. Lawrence Tarazano  
Examiner  
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A handwritten signature in black ink, appearing to be 'D. Lawrence Tarazano', written over the printed name and title.

dlt  
February 28, 2002